Supplemental Table S1: Definition and grading of eAKI based on electrolyte abnormalities[a]

Electrolyte abnormality	Grade			
	1	**2**	**3**	**4**
Hypokalemia	<LLN-3.0 mmol/L	Use of potassium supplement	<3.0-2.5 mmol/L	<2.5 mmol/L
Hypophosphatemia	<LLN-0.8 mmol/L	<0.8-0.6 mmol/L or use of phosphate supplement	<0.6-0.3 mmol/L	<0.3 mmol/L
Hypomagnesemia	<LLN-0.5 mmol/L	<0.5-0.4 mmol/L or use of magnesium supplement	<0.4-0.3 mmol/L	<0.3 mmol/L

[a] Adapted from the National Cancer Institute Common Terminology Criteria for Adverse Events [NCI-CTCAE v4.0] for electrolyte abnormalities (34)

Abbreviations: *eAKI*- electrolyte acute kidney injury; *LLN*- lower limit of normal for age

Supplemental Table S2: Characteristics of participants by SCr-AKI status

Variables	All (N= 115)	SCr-AKI (N= 29)	Non-SCr-AKI (N= 86)
Demographic characteristics			
Male sex	62 (54)	17 (59)	45 (52)
Age at start of cisplatin (years)	8.5 [4.0-13.4]	4.4 [2.4-9.9]**	9.0 [4.9-14.2]
Age <3 years at start of cisplatin	21 (18)	11 (38)**	10 (12)
White	80 (70)	22 (76)	58 (67)
Kidney history			
Kidney medical history[a]	6 (5)	3 (10)	3 (3.5)
History of nephrotoxic medication[b]	45 (39)	6 (21)*	39 (45)
Baseline eGFR (ml/min/1.73m^2)	137±39.5	146±54.4	134±32.4
Cancer characteristics			
Cancer type			
CNS tumor[c]	39 (34)	9 (31)	30 (35)
Neuroblastoma	32 (28)	12 (41)	20 (23)
Osteosarcoma	31 (27)	2 (7)*	29 (34)
Germ cell tumor	8 (7)	2 (7)	6 (7)
Hepatoblastoma	4 (3)	3 (10)*	1 (1)
Other[d]	1 (1)	1 (3)	0 (0)
Cancer involvement of the kidneys	6 (5)	4 (14)*	2 (2)
Radiation to the kidney area[e]	14 (12)	5 (17)	9 (10)
Total Cisplatin dose (mg/m^2)	117 [75.9-150.0]	101 [77.1-198.1]	118 [75.3-122.1]

Continuous variables following a normal distribution are expressed as mean±standard deviation, continuous variables following a non-normal distribution are expressed as median [interquartile range], and categorical variables are expressed as proportion of total

* p-value <0.05, ** p-value <0.01

[a] Kidney medical history: chronic kidney disease, family history of kidney disease, acute kidney injury, dialysis, congenital kidney anomaly or vesicoureteral reflux, kidney stones, urinary tract infection, hypertension, treatment with antihypertensive, serum electrolyte abnormality requiring treatment

[b] Nephrotoxic medications: receipt of acyclovir, aminoglycoside, amphotericin, ifosfamide, furosemide or non-steroidal anti-inflammatory drugs/aspirin, in the 1 week pre- and 1 week post-cisplatin infusion
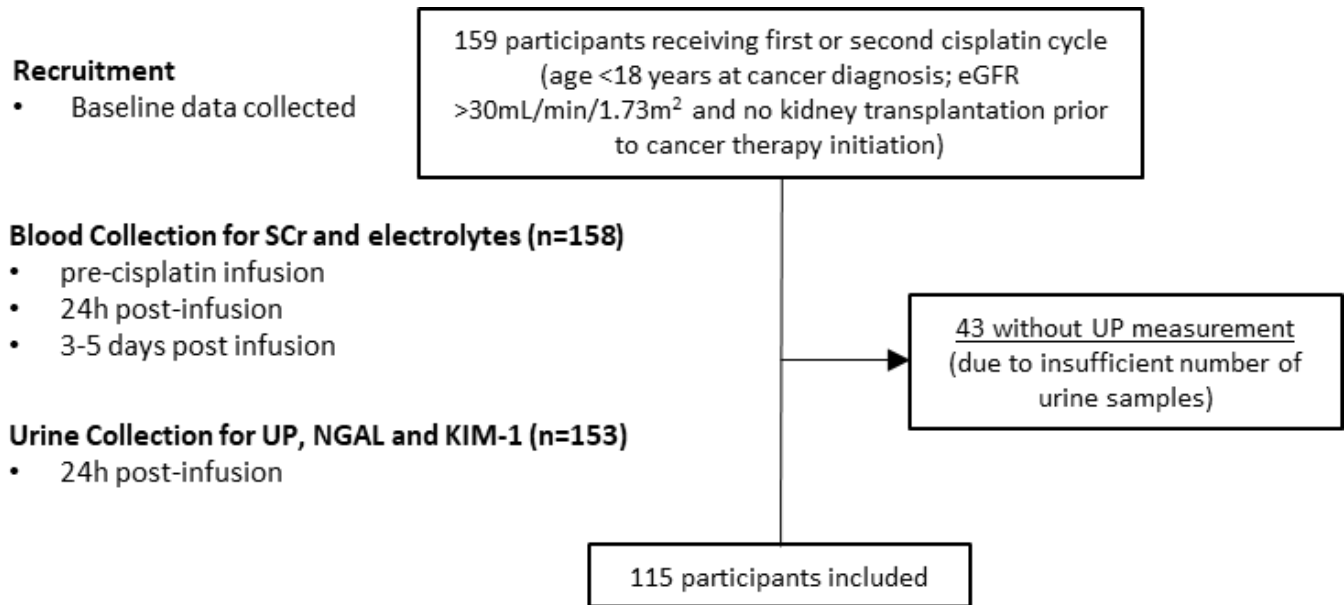
[c] CNS Tumors: astrocytoma, choroid plexus tumor, ependymoma, medulloblastoma, primitive neuroectodermal tumor, atypical teratoid/rhabdoid tumor

[d] Other cancers: lymphoma, nasopharyngeal carcinoma

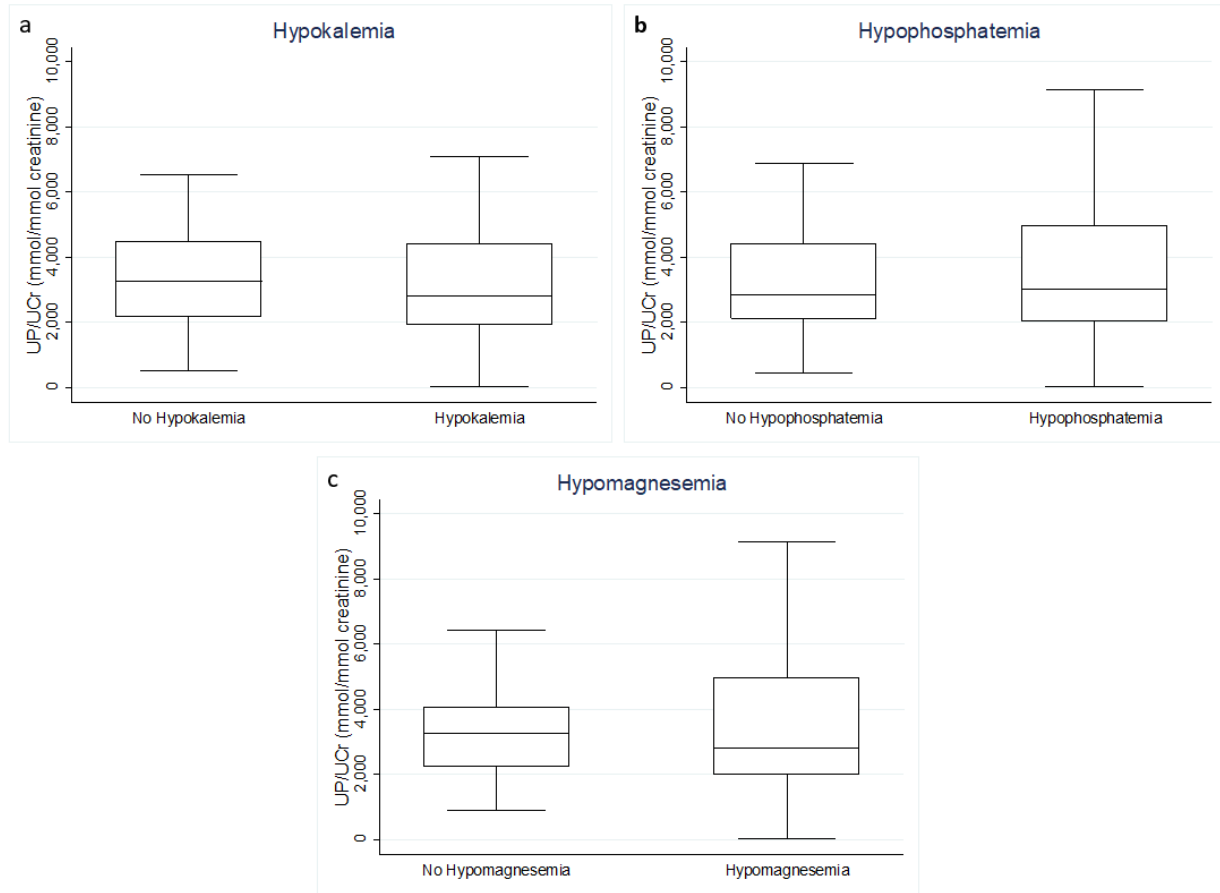[e] Radiation to kidney area: treatment with abdominal or flank radiation

Abbreviations: *AKI*- acute kidney injury; *CNS*- central nervous system; e*GFR*- estimated glomerular filtration rate; *SCr*- serum creatinine

Supplemental Figure S1: Study flow of 159 children treated with cisplatin for cancer

Recruitment
- Baseline data collected

159 participants receiving first or second cisplatin cycle (age <18 years at cancer diagnosis; eGFR >30mL/min/1.73m^2 and no kidney transplantation prior to cancer therapy initiation)

Blood Collection for SCr and electrolytes (n=158)
- pre-cisplatin infusion
- 24h post-infusion
- 3-5 days post infusion

Urine Collection for UP, NGAL and KIM-1 (n=153)
- 24h post-infusion

43 without UP measurement (due to insufficient number of urine samples)
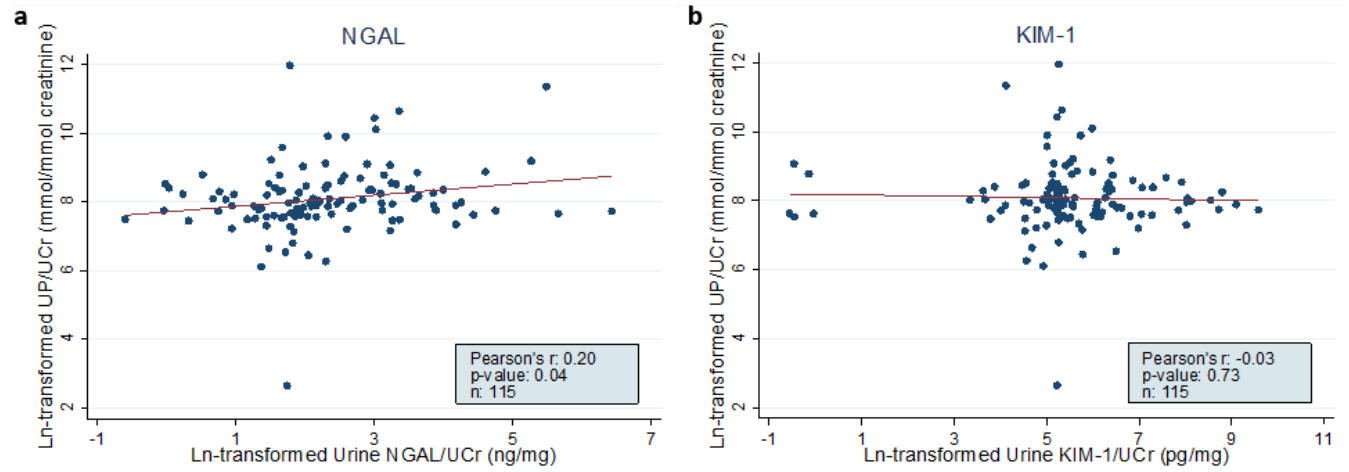
115 participants included

Abbreviations: *eGFR*- estimated glomerular filtration rate; *KIM-1*- Kidney Injury Molecule-1; *NGAL*- Neutrophil gelatinase-associated lipocalin; *SCr*- serum creatinine; *UP*- urine platinum

Supplemental Figure S2: UP/UCr concentrations stratified by electrolyte abnormalities

Box plots depicting median, 25th and 75th percentile, upper and lower adjacent values of UP/UCr concentrations, stratified by hypokalemia (a), hypophosphatemia (b), and hypomagnesemia (c) status. T-tests were performed to compare ln-transformed UP/UCr concentrations by electrolyte abnormalities status. Abbreviations: *UCr*- urine creatinine; *UP*- urine platinum

Supplemental Figure S3: Association of UP with NGAL and KIM-1

Scatter plots between ln-transformed UP/UCr and ln-transformed NGAL/UCr (a), and ln-transformed KIM-1/UCr (b) Abbreviations: *KIM-1*- Kidney Injury Molecule-1; *NGAL*- Neutrophil gelatinase-associated lipocalin; *UCr*- urine creatinine; *UP*- urine platinum